I claim:

- 1. An improved field motion detector which does not treat low frequency vertical transitions as motion.
- 2. A frame motion detector having an improved ability to differentiate motion from subcarrier signal components.
 - 3. A sawtooth artifact detector.
- 4. A sawtooth artifact detector in combination with a film pattern detector, such that the artifact detector can take the film pattern detector out of film mode earlier than it would if it only were responsive to a break in the film pattern.
 - 5. Tandem field motion detectors.
- 6. An improved field based film detector, the detector having a greater immunity to false motion detection resulting from vertical transitions.
- 7. Film pattern detectors and motion detectors used there with which operate by performing end-of-field calculations.
- 8. The combination of a field motion detector and a frame motion detector such that the frame motion detector provides a motion signal used as a verification by the field motion detector.
- 9. An improved NTSC film detector requiring a minimum number of NTSC film pattern sequences.

United States Patent Application of Peter D. Swartz

10. An improved PAL film detector employing a minimum motion threshold detector.

11. A line doubler (interlaced to progressive scan converter).

/